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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/388,813	09/01/1999	WALDEMAR STEPHAN	21222	4469

535 7590 09/24/2002

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EXAMINER

NGUYEN, VINH P

ART UNIT	PAPER NUMBER
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2829

DATE MAILED: 09/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/388,813

Applicant(s)

STEPHAN, WALDEMAR

Examiner

VINH P NGUYEN

Art Unit

2829

-- Th MAILING DATE of this communication app ars on the cover sh t with the correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on appeal brief filed on 07/08/2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
2. Claims are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 13, it is unclear how the conductor is interconnected and associated with the power line and the motor control circuit. In claim 14, it appears that the limitations of this claim is inaccurate since the conductor (38) does not connect the power line (31) to the control circuit. In claim 18, it is unclear which part of the pump assembly in which the motor control circuit controls since the pump assembly includes an electric motor, a motor control circuit and a pump and means for measuring a voltage drop across at least a portion of the conductor. It is also unclear what "means for measuring a voltage drop across at least a portion of a conductor" represents. It appears that this voltage drop measuring means is not a part of the motor control circuit. Furthermore, it is unclear how the conductor is interconnected and associated with the power line and the motor control circuit and this conductor (38) does not connect the power line (31) to the control circuit.

The dependent claims not specifically address share the same indefiniteness as they depend from rejected base claims.

3. Claims 13-23 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

It is unclear from the specification how figures 2 and 3 are associated and interrelated with figure 4. It is also unclear how figure 2 is associated and interrelated with figure 3, therefore the current measurements in these figures are not well understood.

It is also unclear from the specification how sensitive the temperature sensor is when it is used for measuring the temperature of the conductor segment (38) in figure 4 since that conductor segment (38) is not the only conductor to produce the thermal heat.

It is unclear how the microprocessor (37) and the temperature sensor (47) are used for correcting the current measurement at the conductor segment (38) and what has been detected or analyzed in order to make such corrections.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13-16, 18-19 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Nakanishi (Japanese reference JP405252785A) .

As to claims 13, 18 and 22, Nakanishi teaches that it is well known to have an electric motor (10), a pump (12) driven by an electric motor and a power line connected to a motor control circuit (17). Nakanishi discloses a motor control as shown in figure 1 using current sensors (21-22) for measuring the current flowing through the motor without using a resistor. It would have been obvious for one of ordinary skill in the art to measure the current flowing through a conductor segment as taught by Nakanishi so that undesired power loss is avoided and the accurate current measurement is obtained. As to claim 14, the portion of the conductor of Nakanishi is a piece of current supplying line. As to claim 15, it appears that the current drawn is calculated by a computing unit (15). As to claim 16, it appears that the measured current is a current draw of a pump (12). As to claim 19, it appears that the conductor is a piece of resistance wire with a known specific resistance and a defined length. As to claim 21, the value for the resistance of the conductor would have been an obvious design choice since this value depends on the size and the material of the conductor.

6. Claims 13-14, 16, 18-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art on pages 1-2 of the specification in view of Eastman (Pat # 720,335).

As to claims 13-14 and 18, Applicant's admitted prior art on pages 1-2 of the specification teach that it would have been well known to have an electronically controlled pump assembly including an electric motor connected to a power line, a motor control circuit

connected to the motor and a pump driven by the motor. The admitted prior art does not teach a technique of measuring a current flowing through a segment of a conductor without using a resistor. However, Eastman teaches that it would have been well known in the art to measure a current flowing through a conductor without using a resistor. It would have been obvious for one of ordinary skill in the art to provide the teaching of Eastman to the device of admitted prior art so that undesired power loss is avoided and the accurate current measurement is obtained. As to claim 16, it appears that the measured current is a current draw of a pump. As to claim 19, it appears that the conductor is a piece of resistance wire with a known specific resistance and a defined length. As to claim 21, the value for the resistance of the conductor would have been an obvious design choice since this value depends on the size and the material of the conductor.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Sines (pat # 1,446,995) disclose temperature compensating apparatus.

Wilder (Pat # 5,234,319) disclose a sump pump drive system.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINH P. NGUYEN whose telephone number is (703) 305-4914.

Art Unit: 2829

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4900.


VINH P. NGUYEN
PRIMARY EXAMINER
ART UNIT 2829
09/19/2002